

CLIMATOLOGICAL DATA FOR JANUARY, 1911.

DISTRICT No. 11, CALIFORNIA.

Prof. ALEXANDER G. MCADIE, District Editor.

GENERAL SUMMARY.

January, 1911, was a month of unusually heavy precipitation in all parts of California. In the central portion of the State the amounts were in general about three times the normal, while in the southern and northern counties they were about twice the normal. A noteworthy feature was the breaking of the dry period, which had existed practically since the spring of the preceding year. As has been shown in other reports, the year 1910 was one of comparatively little precipitation. With the exception of the rains and snows of the first few months, the year will go down in history as one of the driest known. The close of the year was phenomenally dry and there was less visible water in the usual places of supply than had been known for many years. The snow cover was restricted and there were many bare spots at elevations which hitherto had always been covered at that period. The run-off was the lightest for any December of which there is record in this State and there was general anxiety among water users lest the shortage should continue. All these conditions were changed during the first month of the new year. Beginning with the moderate rain of January 9 and a rather light snowfall in the mountains, there ensued a period lasting practically till the end of the month, when the storms contributed daily large amounts of water. At the lower levels the rainfall in the central portion of the State was the heaviest known since 1862. At higher levels the depth of the snow steadily increased, and although owing to warm rains there was rapid melting and an excessive run-off, there was at the close of the month more snow on the ground in the Sierra Nevada than had been known for many years. Strangely enough, there was very little snow in the mountains of southern California. Elsewhere snowfall reports are given in more detail.

There were no features of special interest connected with the temperature conditions.

Well-marked foehn effects were experienced January 4, 5, and 6 in the sections south of the Sierra Madre. Afternoon temperatures at Los Angeles varied from 80 to 82°, and even at coast stations, like San Diego, afternoon readings were as high as 74°.

During the first week of January the pressure distribution was of the dry type and the prevailing movement of the lower air was from the Great Basin westward over the mountains and down the western slopes into California. At the beginning of the second week there was a decided change. An extensive depression moved in from the North Pacific. The lower air movement was from the south and rain began to fall in the northern counties. The condition continued and the type developed into that of a well-marked "wet" character. The

rain area spread, and, as stated above, the accumulated precipitation at the end of the month broke the record at many points. An interesting table of rainfall, given elsewhere, shows that in the mountain sections the monthly totals did not equal or surpass those of January, 1909. The rainfall seems to have been greatest near sea level. At San Francisco, for example, 13.79 inches fell, which was the heaviest rainfall since 1862, although the number of rainy days did not surpass that of 1909.

TEMPERATURE.

The mean temperature for the State was 1° above the normal. The following table gives the mean values for California during the time for which records have been kept:

Year.	Mean.	Departure.	Year.	Mean.	Departure.
	°F.	°F.		°F.	°F.
1897.....	45.5	+0.8	1905.....	48.3	+3.6
1898.....	41.0	-3.7	1906.....	47.5	+2.8
1899.....	46.4	+1.7	1907.....	43.9	-0.8
1900.....	47.9	+3.2	1908.....	46.7	+2.0
1901.....	43.9	-0.8	1909.....	47.8	+3.1
1902.....	44.5	-0.2	1910.....	41.9	-2.8
1903.....	46.6	+1.9	1911.....	45.7	+1.0
1904.....	45.8	+1.1			

The highest temperature reported at any station was 90° at San Jacinto on the 19th. This was 1° higher than the warmest day reported in January, 1910. The lowest was -24° at Madeline on the 22d, or 6° warmer than the coldest day in January, 1910.

PRECIPITATION.

The average monthly precipitation for the State was 13.20 inches, or 7.79 inches above the normal. The distribution of the rain geographically was not uniform. There was much more rain north of the Sierra Madre than south of that range. An unusually heavy rain occurred at Fort Ross on the 19th; 3.99 inches fell between 6 a. m. and 12 noon.

The average monthly precipitation for January is as follows:

Year.	Mean.	Departures.	Year.	Mean.	Departures.
	Inches.	Inches.		Inches.	Inches.
1897.....	2.69	-2.72	1905.....	4.37	-1.04
1898.....	1.08	-4.33	1906.....	7.86	+2.45
1899.....	3.53	-1.88	1907.....	7.46	+2.05
1900.....	3.39	-2.11	1908.....	4.63	-0.78
1901.....	5.21	-0.20	1909.....	16.17	+10.76
1902.....	1.38	-4.03	1910.....	4.86	-0.55
1903.....	4.56	-0.85	1911.....	13.20	+7.79
1904.....	1.38	-4.03			

Snowfall.—Siskiyou County: McCloud, 68 inches fell, 30 inches remained; Sisson, 96 inches fell, 19 inches remained; Gilta, 91 inches fell, 15 inches remained. Humboldt County: Weitchpec, 36 inches fell, all melted. Modoc County: Alturas, 38 inches fell, or three times as much as during any January since the record has been kept; 4 inches remained. Lassen County: Long Valley, 60 inches fell, 5 inches remained; Madeline, 50 inches fell, 20 inches remained; Eagle Lake, 88 inches fell. Plumas County: La Porte, snowfall unusually heavy, exact amount not known; 96 inches remained on the ground, or 41 inches more than at the end of January, 1910, and 60 inches more than at the close of January, 1909; Quincy, 114 inches fell, 45 inches remained. Sierra County: Sierra City, 149 inches fell, 43 inches remained; Sierraville, 107 inches fell, 48 inches remained; Table Rock, 152 inches fell, 48 inches remained. Nevada County: Bear Valley, 209 inches fell, 78 inches remained; in January, 1910, 114 inches fell and 72 inches remained. Fordyce Dam: 260 inches fell, 224 inches remained; in January, 1910, 109 inches fell, of which 67 inches remained. Placer County: Summit, 283 inches fell, 218 inches remained; in January, 1910, 86 inches fell and 68 inches remained. The 1911 January snowfall is the heaviest recorded at Summit since 1878. Emigrant Gap, 177 inches fell, 60 inches remained; Blue Canon, 146 inches fell, 50 inches remained; in January, 1910, 110 inches fell and 36 inches remained; Cisco, 203 inches fell, 102 inches remained. Eldorado County: Pilot Creek, 115 inches fell, 36 inches remained. Alpine County: Tamarack, 400 inches fell, 310 inches remained. Mariposa County: Yosemite, 10 inches fell; Summerdale, 57 inches fell, 20 inches remained. Kern County: Glenville, the storms were all warm and little snow fell. Inyo County: Bishop Creek, 91 inches fell, 54 inches remained. Southern California: Campo, the rains were the warmest in years and no snow fell in the high mountains; Cuyamaca, over 10 inches of rain but no snow; Fredalba, 20 inches fell, none remained; Idyllwild, no snow fell. San Bernardino County: Summit, no snow fell.

MISCELLANEOUS NOTES.

Downieville.—The snow was very heavy, breaking down houses and trees.

Georgetown.—The rainfall for this month breaks all previous records.

Indio.—There was an overflow due to water from the mountains on the 30th.

Jolon.—This was the wettest January since 1882.

La Porte.—Owing to severe storms, everyone in La Porte has been busy shoveling snow to keep houses from breaking down.

Merced.—Heavy rain on 30th and 31st caused all creeks and rivers to overflow, doing considerable damage to roads, bridges, and canals.

Milton.—The rainfall was the greatest recorded for any month in 22 years.

Peachland.—The hailstorm of 25th was the heaviest in many years.

Willows.—While the rainfall was twice the normal, it caused no flood, coming in ideal warm showers. Over 600 reports were given during the month on rainfall.

SUNSHINE.

The following table gives the total hours of sunshine and percentages of the possible:

Stations.	Hours.	Per cent of possible.	Stations.	Hours.	Per cent of possible.
Eureka.....	103	35	Sacramento.....	142	47
Fresno.....	144	47	San Diego.....	172	54
Los Angeles.....	183	58	San Francisco.....	124	41
Mount Tamalpais.....	91	30	San Jose.....	132	43
Red Bluff.....	121	40	San Luis Obispo.....	123	39

THUNDERSTORMS.

Avalon, 31st; Claremont, 30th; Dyerville, 25th; Nimeshew, 29th, 31st; North Fork, 31st; Oceanside, 30th; Pasadena, 30th; Peachland, 11th, 25th; San Leandro, 13th; Sierra Madre, 30th; Wheatland, 12th; Eureka, 25th; Los Angeles, 30th; San Luis Obispo, 30th.

EARTHQUAKES.

Branscomb, 27th; Campbell, 30th; Fort Bragg, 27th; Hollister, 11th; Hot Springs, 4th; Point Loma, 28th, 30th; Weitchpec, 18th.

It is said that the earthquake of the 27th was not felt beyond a distance of 25 miles from Branscomb.

The following earthquakes were recorded by the Seismological Observatory at Santa Clara College by Rev. Jerome S. Ricard, S. J.: January 3, 3.39.30 to 5.20 p. m., period ranging from 1.5 second at first preliminary to 24 seconds at the end; origin, 10,952 kilometers northwest by north; this was the quake at Semiretchinsk, Russian Turkestan. January 9, 1.25.30 p. m. to 1.26.34; period, 0.5 second to 1.5 seconds; faint shock felt by some; origin, 96 miles northwest. January 10, 3.17.23 p. m. to 3.19.40 p. m.; period, 0.75 of a second; light shock felt; origin, 103 kilometers northwest by west. January 11, 9.34.05 p. m.; origin, 110 kilometers northwest. January 30, 2.43 p. m.; origin, 67 kilometers northwest by west; faint shock felt.

NOTES ON THE RIVERS OF THE SACRAMENTO AND SAN JOAQUIN WATERSHEDS FOR THE MONTH OF JANUARY, 1911.

By N. R. TAYLOR, Local Forecaster.

Sacramento watershed.—Notwithstanding the fact that more rain fell in the drainage basin of the Sacramento Valley during January than has ever before fallen in any corresponding month since the records have been kept by the Weather Bureau, the water courses averaged much below the stages usually maintained during the month in question. In most of the streams the average water levels were the lowest ever before observed for the month of January. This was notably so of the Sacramento River between the mouths of the Pitt and Walnut Grove Rivers.

Except light showers in the upper Sacramento Valley and in the foothills on December 17, there was no precipitation in this watershed from December 13, 1910, to January 8, 1911, inclusive, and in the meanwhile all streams, many of which were already unprecedently

TABLE 1.—Climatological data for January, 1911. District No. 11, California.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.				Observers.					
				Mean.			Departure from the normal.			Highest.			Lowest.			Greatest daily range.			Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, .01 inch or more.	Number of partly cloudy days.	Number of cloudy days.
							Date.			Date.			Date.			Date.									
Oregon.																									
Klamath Agency.	Klamath.	4,169	3	21.6	.....	42	1	-12	22	32	2.25	.....	0.60	22.5	7	10	9	12	s.	Edson C. Watson.			
Klamath Falls	.....	4,100	22	26.0	-4.3	49	8	-9	23	27	2.94	+ 0.35	0.81	27.0	13	16	5	10	nw.	W. H. Heileman.				
Lakeview.	Lake.	4,825	28	.....																Geo. L. Wharton, jr.				
Merrill.	Klamath.	4,070	5	27.0	.....	52	8	-9	23	29	2.20	.....	1.00	12.0	7	13	15	3		Mrs. Agnes Ritchson.			
Yonna.	.....	4,146	4	24.8	.....	51	7	-18	23	40	2.51	.....	0.70	8.2	14	8	10	13	s.	Jacob Rueck.			
California.																									
Alameda.	Alameda.	2	51.4	.....	72	6	34	22	55	12.50	.....	2.20	0.0	17	9	7	15	sw.	Chas. E. Sears.				
Alturas.	Modoc.	4,460	7	26.7	.....	54	4†	-21	23	55	3.16	.....	0.68	38.5	14	13	8	10	s.	Prof. C. B. Towle.			
Angiola.	Tulare.	208	11	41.0	-3.8	56	31	24	12	18	2.92	+ 1.83	0.57	0.0	8					Santa Fe Co.					
Antioch.	Contra Costa.	102	32	50.3	+ 3.8	68	6	32	5	.....	11.33	+ 8.94	3.47	0.0	15	10	0	21	e.	Southern Pacific Co.				
Aptos.	Santa Cruz.	102	26	50.2	+ 1.7	66	7	31	1†	.....	15.75	+ 11.00	2.02	0.0	15	13	2	16	nw.	Do.				
Arrowhead Springs.	San Bernardino.	2,000	2	.....															G. I. Royce.					
Auburn.	Placer.	1,360	40	45.5	-0.1	69	7	32	17	31	20.77	+ 14.89	2.18	0.0	16	13	0	18	se.	Southern Pacific Co.					
Avalon.	Los Angeles.	1	56.6	.....	78	5	44	1†	22	31	0.74	0.0	9	18	5	8			T. S. Manning.					
Azusa.	.....	540	9	55.0	.....	58	5	28	1	49	9.40	+ 5.87	3.12	0.0	9	20	2	9	A. P. Griffith.				
Bagdad.	San Bernardino.	784	8	55.8	.....	77	23	30	3	38	0.00	.....	0.00	0.0	0				Santa Fe Co.				
Bakersfield.	Kern.	404	22	52.4	+ 4.3	77	30	34	19	28	0.78	- 0.33	0.45	0.0	4	22	1	8	w.	Do.					
Barstow.	San Bernardino.	2,105	8	44.6	.....	80	19	18	5	52	0.61	.....	0.25	0.0	3	27	1	3	se.	E. L. White.			
Berkeley.	Alameda.	317	24	48.8	+ 1.2	66	6	35	22	21	15.99	+ 10.71	2.88	0.0	17	12	3	16	State University.						
Biggs.	Butte.	98	46.0	+ 1.4	67	7	32	1†	11.11	+ 6.88	1.90	0.0	12	12	0	19	e.	Southern Pacific Co.							
Bishop.	Inyo.	4,450	19	39.7	+ 1.3	67	6	18	11†	45	5.02	+ 3.82	1.47	6.0	8	22	3	6	w.	W. A. Chalfant.					
Bishop Creek.	.....	1	.....																Paul E. Lodge.				
Blocksburg.	Humboldt.	1,700	5	35.0	.....	60	5	24	21†	28	19.03	.....	3.75	26.0	20	4	6	21	se.	Victor Hope.			
Blue Canon.	Placer.	4,695	12	39.0	-0.7	68	4	18	16	36	33.02	+ 22.87	4.75	146.0	17	10	0	21	sw.	Southern Pacific Co.					
Blythe.	Riverside.	2	.....																M. L. Willits.					
Branscomb.	Mendocino.	2,000	11	41.2	-2.8	74	6	23	22	39	23.74	+ 8.83	0.85	14.0	20	10	2	19	n.	A. J. Haun.					
Brawley.	Imperial.	-105	2	54.2	.....	75	19	23	3	49	6.02	.....	8.0	12	12	0	19	s.	M. D. Witter.				
Brush Creek.	Butte.	2,140	7	40.0	.....	66	5	22	1†	38	33.12	.....	1.64	42.1	15	11	0	20	Cal. Gas & Elect. Co.				
Burney.	Shasta.	1	32.2	.....	60	6	-	23	43	11.92	0.40	0.0	2	14	5	12		Do.	Mrs. M. D. Chambers.					
Calexico.	Imperial.	0	53.6	.....	74	31	28	3	37	0.47	.....	0.40	0.0	17	12	3	16	se.	J. E. Peck.				
Caliente.	Kern.	1,290	35	51.7	+ 2.3	69	8†	37	10	.....	2.33	+ 0.84	1.00	0.0	9	18	0	13	nw.	Southern Pacific Co.				
Calistoga.	Napa.	363	39	52.3	+ 4.2	78	18†	24	4	.....	17.67	+ 9.96	3.40	0.0	15	10	1	20	s.	Do.				
Campbell.	Santa Clara.	217	14	48.2	+ 0.7	72	7	28	1†	40	12.61	+ 9.91	3.23	0.0	17	12	0	19	se.	F. M. Righter.					
Camptonville (near).	Yuba.	3,500	4	41.6	.....	74	5	26	17	48.88	6.27	55.00	12	0	19	12	0	19	w.	Cal. Gas & Elect. Co.				
Cedarville.	Modoc.	4,675	17	29.8	-1.7	53	9	-4	17	34	3.67	+ 2.26	0.80	45.0	14	12	5	14	sw.	T. H. Johnstone.					
Chico.	Butte.	189	41	46.4	-0.5	74	6	25	1†	42	11.39	+ 6.93	1.90	0.0	17	12	2	17	s.	G. H. Stephenson.					
China Flat.	Humboldt.	600	2	41.7	.....	58	18	22	23	26	12.10	.....	2.27	4.0	20	10	5	16	s.	O. I. Westerburg.			
Chino.	San Bernardino.	714	19	52.7	+ 2.3	73	5	30	2†	.....	7.88	+ 4.07	2.53	0.0	10	14	0	16	e.	Southern Pacific Co.				
Cisco.	Placer.	5,939	40	30.4	-0.3	42	3	9	22	.....	20.30	+ 11.10	3.80	203.0	16	12	3	16	w.	Do.				
Claremont.	Los Angeles.	1,200	19	52.6	+ 2.9	82	5	30	1†	42	8.57	+ 5.13	2.98	0.0	10	16	2	13	w.	F. P. Brackett.					
Cloverdale.	Sonoma.	340	9	.....							15.72	.....	4.00	0.0	16	12	0	19	s.	John O. Ogle.			
Cotfax.	Placer.	2,421	40	41.4	-3.0	73	7	25	11	37	29.38	+ 20.63	3.78	10.0	17	12	0	19	se.	Southern Pacific Co.					
Colusa.	Colusa.	60	8	.....															C. D. McComish.					
Corning.	Tehama.	277	25	48.8	+ 3.6	65	5†	34	1	.....	7.26	+ 2.75	1.00	0.0	15	10	3	18	s.	Southern Pacific Co.				
Cuyamaca.	San Diego.	4,677	12	43.8	+ 6.8	65	29	25	1	32	10.19	+ 4.00	3.11	0.0	11	4	15	12	e.	L. L. Macquarie.					
Daunt.	Tulare.	4,000	4	43.1	.....	68	5†	21	1	40	14.75	.....	2.93	0.0	11	15	2	14	w.	D. L. Wishon.			
Davisville.	Yolo.	51	39	45.0	-2.6	74	6	20	1	51	13.08	+ 9.57	2.95	0.0	17	3	11	17	se.	Agricultural Ex. Farm.					
Deer Creek.	Nevada.	3,700	4	36.1	.....	65	6	18	22	37	41.77	.....	4.63	97.0	19	12	0	19	se.	Cal. Gas & Elect. Co.			
Del Monte.	Monterey.	51	54.4	.....	74	6	33	1†	34	8.45	.....	1.18	0.0	13	13	1	17	sw.	Del Monte Hotel Co.				
Delta.	Shasta.	1,138	26	43.4	+ 1.6	73	6	28	1†	35	16.70	+ 7.61	3.60	6.5	19	10	0	21	s.	Southern Pacific Co.					
Denair.	Stanislaus.	126	11	47.8	+ 2.3	70	9	26	3†	39	7.08	+ 5.11	1.28	0.0	17	11	4	16	sw.	Santa Fe Co.					
Dobbins (near).	Yuba.	1,650	7	47.8	.....	82	6	32	1†	42	29.75	.....	4.31	0.0	19	11	4	16	e.	Cal. Gas & Elect. Co.			
Dudleys.	Mariposa.	3,000	3	40.6	.....	67	6	18	2	42	29.48	.....	4.03	2.0	17	10	3	18	s.	W. H. Dudley.			
Dunnigan.	Yolo.	65	34	50.6	+ 4.3	72	5	36	15	.....	10.12	+ 5.76	1.83	0.0	14	11	3	17	s.	Southern Pacific Co.				
Dunsmuir.	Siskiyou.	2,285	22	36.2	-2.7	64	6	18	23	.....	16.02	+ 6.26	1.78	49.0	19	11	0	20	s.	Do.				
Durham.	Butte.	160	45.0	-0.2	74	6	26	1†	43	10.50	+ 6.27	2.00	0.0	16	9	0	22	s.	R. W. Durham.						
El Cajon.	San Diego.	482	12	54.7	+ 0.9	87	5	30	24	55	4.74	+ 2.59	2.70	0.0	11	18	4	9	e.	H. H. Kessler.					
Electra.	Amador.	725	7	49.1	.....	74	7	29	1	38	23.56	.....	3.50	0.0	16	12	0	19	sw.	Cal. Gas & Elect. Co.			
Elsinore.	Riverside.	1,234	16	50.1	-0.2	79	5	22	2	48	5.81	+ 3.22	2.11	0.0	9	16	6	9	w.	A. F. Shultz.					
Emigrant Gap.	Placer.	5,230	37	39.4	+ 4.5	61	8																		

TABLE 1.—Climatological data for January, 1911. District No. 11—Continued.

Stations.	Counties.	Elevation, feet.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.			
			Length of record, years.	Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.			
<i>California—Continued.</i>																				
La Porte.	Plumas.	5,000	17	31.9	-1.5	68	9	10	22	48	...	...	...	...	12	0	19	s.	
Le Grand.	Merced.	255	11	47.6	+1.7	76	9	30	1†	36	7.15	+5.59	1.18	0.0	13	11	0	20	Santa Fe Co.	
Lemon Cove.	Tulare.	600	16	53.8	+5.6	83	6	28	3	52	5.99	+3.31	1.67	0.0	4	12	4	15	n.	
Lick Observatory.	Santa Clara.	4,209	22	38.9	-0.8	59	5	25	10	15	15.76	+11.03	3.12	0.0	19	12	2	17	The Director.	
Livermore.	Alameda.	485	49	49.2	-0.1	77	6†	29	1	41	12.76	+9.85	2.54	0.0	19	12	1	18	E. G. Still.	
Lodi.	San Joaquin.	45	29	46.4	+0.2	60	6	27	1	30	15.01	+11.30	2.72	0.0	17	12	3	16	Ezra Fiske.	
Lone Pine.	Inyo.	2,728	6	43.4	-	62	6	19	17	39	1.90	-	1.38	0.0	3	19	7	5	G. F. Marsh.	
Long Valley.	Lassen.	4,400	2	30.2	-	55	8	-5	18	42	8.99	-	1.35	60.2	15	4	11	A. G. Evans.		
Los Angeles.	Los Angeles.	293	34	56.9	+3.8	82	5	42	12	31	6.70	+3.77	2.97	0.0	12	14	4	13	U. S. Weather Bureau.	
Los Banos.	Merced.	121	24	52.9	+6.4	65	28	31	3	-	5.00	+3.48	1.24	0.0	11	9	0	22	Southern Pacific Co.	
Los Gatos.	Santa Clara.	600	24	49.8	+2.2	73	7	35	1	30	27.66	+21.09	6.15	0.0	18	12	0	19	F. H. McCullagh.	
McCloud.	Siskiyou.	3,410	1	36.6	-	58	4†	10	22†	34	16.52	-	2.08	68.3	20	10	6	15	F. F. Spencer.	
Maddoel.	do.	4,258	24	48.4	-	51	6†	-8	23	35	3.49	-	0.50	29.0	15	9	7	15	Butte Valley Land Co.	
Madeline.	Lassen.	5,270	2	23.4	-	55	7	-24	22	44	5.30	-	1.20	50.5	16	11	4	16	J. H. Williams.	
Magalia.	Butte.	2,321	7	45.1	-	78	4	26	1	38	38.40	-	6.80	10.0	19	12	1	18	Butte Co. R. R. Co.	
Mammoth Tank.	Imperial.	257	33	48.9	-5.0	70	29	31	7†	30	0.85	+0.68	0.50	0.0	2	15	0	16	Southern Pacific Co.	
Marysville.	Yuba.	67	40	47.1	-1.3	76	4	28	1	44	14.36	+11.23	2.45	0.0	15	13	0	18	Do.	
Mecca.	Riverside.	-185	5	54.2	-	81	5	25	3	50	0.35	-	0.10	0.0	4	7	8	e.		
Menlo Park.	San Mateo.	64	33	49.6	+2.3	70	7	34	3†	44	17.6	+11.72	2.80	0.0	11	12	0	19	Cal. Gas & Elect. Co.	
Mered.	Merced.	173	37	48.0	+1.0	78	8	28	4	33	7.99	+5.89	2.30	0.0	16	5	16	J. H. Southwick.		
Mill Creek (1).	Amador.	4	40.0	-	60	8	26	4	28	31.77	-	4.12	7.2	18	13	0	18	Southern Pacific Co.		
Milton (near).	Calaveras.	660	20	48.5	+1.5	67	8	32	1	28	17.45	+13.26	3.20	0.0	18	10	5	16	Date Palm Garden.	
Modesto.	Stanislaus.	90	39	49.7	+3.1	66	8	33	3†	-	5.00	+3.16	0.76	0.0	14	10	1	20	Southern Pacific Co.	
Mojave.	Kern.	2,751	34	50.6	+5.3	68	2†	32	12†	32	3.27	+2.37	1.60	0.0	4	21	0	10	Santa Fe Co.	
Mokelumne Hill.	Calaveras.	1,550	18	46.8	+5.0	69	8	33	10†	24	23.01	+18.34	3.44	T.	17	7	6	18	Cal. Gas & Elect. Co.	
Mono Ranch.	Ventura.	3,210	5	43.3	-	70	5	22	1	36	23.34	-	4.90	0.0	11	14	8	9	J. H. Southwick.	
Montague.	Siskiyou.	2,450	28	29.4	-6.7	56	18	0	13	46	2.40	+1.00	0.92	8.5	15	9	10	Do.		
Monterey.	Monterey.	15	46	50.3	+0.1	64	7†	28	1†	49	9.21	+6.39	1.79	0.0	16	10	5	16	Herbert Lathrop.	
Monterio.	Kern.	4,500	12	44.6	-5.1	66	31	28	1†	24	4.18	+1.56	1.00	0.0	12	14	3	14	E. D. Debay.	
Mount Tamalpais.	Marin.	2,375	12	44.0	-1.9	66	7	32	10	15	12.36	+7.14	2.46	T.	17	7	4	20	U. S. Weather Bureau.	
Napa City.	Napa.	20	34	46.0	+0.6	67	7	27	4	36	14.40	+9.27	2.85	0.0	18	7	19	Thomas Hull.		
Napa (S. H.).	do.	60	33	46.8	+1.4	74	6	31	5	39	13.50	+8.65	3.13	0.0	17	12	16	W. H. Martin.		
Needles.	San Bernardino.	477	19	57.2	+4.8	74	72	20†	34	2	28	0.51	-	0.10	0.26	0	2	16	Santa Fe Co.	
Nellie.	San Diego.	5,350	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	T. O. Bailey.		
Nevada City.	Nevada.	2,580	19	40.8	0.0	75	6	20	1	48	35.98	+25.20	6.10	18.0	19	10	0	21	S. W. Marsh.	
Newcastle.	Placer.	970	18	47.8	+1.4	68	6	30	2	30	23.03	+18.09	2.95	0.0	19	13	0	18	G. D. Kellogg.	
Newhall.	Los Angeles.	1,200	34	46.8	-1.1	76	7	22	28	-	5.82	+3.28	3.25	0.0	7	13	0	13	E. S. Wangenheim.	
Newman.	Stanislaus.	91	22	53.5	+5.5	66	6†	40	3†	22	5.70	+3.70	1.11	0.0	15	13	0	18	Cal. Gas & Elect. Co.	
Jimshew.	Butte.	2,500	7	40.5	-	70	4	23	22	33	28.77	-	5.28	16.5	10	-	-	-	W. G. Shand.	
North Bloomfield.	Nevada.	3,200	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	C. H. Shinn.		
North Fork.	Madera.	3,000	7	44.9	-	72	7	23	1	39	22.68	-	3.35	0.0	14	7	11	13	Southern Pacific Co.	
Oakdale.	Stanislaus.	156	17	48.4	+2.7	66	8	27	2	-	8.03	+5.46	1.42	0.0	16	13	2	16	B. L. Johnson.	
Oak Grove.	San Diego.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Chabot Observatory.		
Oceanside.	Alameda.	36	35	49.4	+1.8	68	6	36	22	25	15.35	+10.19	2.16	0.0	18	12	4	15	H. D. Brodie.	
Ojai Valley.	San Diego.	1	53.6	-	75	4	37	11	28	3.94	-	1.02	0.0	10	14	7	10	W. H. Duncan.		
Orland.	Ventura.	900	5	52.8	-	88	5	27	2	51	14.83	-	4.17	0.0	11	13	8	10	U. S. Reclamation Service.	
Orleans.	Glenn.	254	29	45.6	-2.0	75	6	29	9	39	7.57	+4.30	1.42	0.0	15	10	7	14	Fred. T. Hale.	
Oroville (near).	Humboldt.	520	8	44.2	-	65	5†	27	23	34	11.98	-	1.54	8.0	19	8	0	23	E. D. Fairchild.	
Palermo.	Butte.	250	27	46.9	-1.2	75	5	28	22	40	15.64	+10.71	2.15	0.0	17	12	1	18	Miss Hettie Boalt.	
Palm Springs.	Riverside.	213	20	45.7	+0.2	73	6	21	1	42	13.02	+8.46	2.60	0.0	14	13	4	14	Southern Pacific Co.	
Pasadena.	Los Angeles.	584	22	54.2	-1.1	75	6	31	2†	-	1.79	+1.05	0.90	0	4	9	14	E. R. Sorven.		
Paso Robles.	San Luis Obispo.	827	21	53.3	+0.6	84	5	31	1	44	9.82	+5.69	2.38	0.0	12	18	4	9	Dr. F. W. Sawyer.	
Peachland.	San Luis Obispo.	800	24	48.8	+4.2	75	5†	27	1	52	11.20	+8.28	2.50	0.0	15	15	1	17	E. H. Parnell.	
Pestock Camp.	Sonoma.	190	15	46.2	-1.8	80	6	26	22	49	16.56	+6.69	3.30	0.0	18	9	4	18	Tuolumne W. P. Co.	
Placerville.	Tuolumne.	3,750	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A. Baring-Gould.		
El Dorado.	El Dorado.	1,875	22	44.0	+2.9	62	6	24	1	34	28.76	+20.68	3.42	0.0	17	7	7	17	John Hyslop.	
Point Lobos.	San Francisco.	250	18	50.1	+1.7	68	6	42	13†	20	13.06	+8.32	1.72	0.0	18	13	2	16	U. S. Weather Bureau.	
Point Reyes.	Marin.	490	19	50.0	+0.6	67	6	41	21	18	7.00	+1.25	1.24	0.0	18	8	6	17	Leslie McAtulif.	
Porterville.	Tulare.	464	22	52.7	+4.6	76	8	29	3†	41	4.56	+3.12	1.09	0.0	13	10	4	17	D. N. Rogers.	
Quincy.	Plumas.	3,400	16	34.1	-0.5	54	4†	3	23	36	24.20	+16.26	3.39	11.04	18	13	2	16	U. S. Weather Bureau.	
Red Bluff.	Tehama.	307	34	46.0	+0.6	73	4	30	13	32	9.08	+4.41	2.21	T.	15	11	2	18	L. F. Bassett.	
Redding.	Shasta.	1,352	18	52.4	+1.6	81	5	29	1	42	4.44	+1.85	1.00	0.0	10	14	4	13	Paul W. Moore.	
Redlands.	San Bernardino.	347	37	50.0	+3.9	72	7	27	1	42	5.05	+3.81	1.52	0.0	6	14	2	15	Santa Fe Co.	
Rialto (near).	San Bernardino.	2,550	5	48.4	-	72	5	34	12	23	19.77	-	4.90	0.0	11	12	7	10	So. Cal. Edison Co.	
Riverside.	Riverside.	851	29	52.2	+1.1	78	5	28	1	42	4.70	+2.88	1.02	0.0	10	15	5	11	C. W. Barton.	
Rocklin.	Placer.	249	40	50.4	+3.8	75	7	32	1†	35	20.12									

TABLE 1.—*Climatological data for January, 1911. District No. 11—Continued.*

Stations.	Counties.	Elevation, feet.	Length of record, years	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Observers.				
				Mean.	Departure from the normal.			Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.			
					Highest.	Date.	Lowest.														
<i>California—Continued.</i>																					
Southeast Farallon.	San Francisco.	30	8	50.8	.....	58	6	43	10	8	7.57	.....	1.38	0.0	18	11	4	16	s.	U. S. Weather Bureau.
Sonora.	Tuolumne.	1,825	23	46.1	.....	64	29	29	29	29	+15.51	3.45	0.0	17	10	6	15	s.	Chas. P. Jones.	
Squirrel Inn.	San Bernardino.	5,280	1	49.8	.....	56	19	27	11	20	20.85	.....	5.85	0.0	9	15	4	12	s.	A. D. Frantz.
Stirling City.	Butte.	3,525	7	44.1	.....	80	7	22	17	42	32.55	.....	4.90	80.5	18	7	3	21	.....	Butte Co. R. R. Co.
Stockton (S. H.).	San Joaquin.	23	40	46.2	- 0.3	64	29	30	5	24	11.32	+	8.33	1.72	0.0	18	13	0	18	se.	State Hospital.
Storey.	Madera.	296	11	45.4	+ 0.5	71	8	24	17	31	5.92	+ 4.21	2.75	0.0	5	12	0	19	s.	Santa Fe Co.	
Suisun.	Solano.	20	31	47.8	+ 0.6	71	27	30	22	22	12.30	+ 8.34	2.40	0.0	14	12	2	17	sw.	Southern Pacific Co.	
Summerdale.	Marijuana.	5,270	15	38.5	+ 1.4	68	5	16	29	39.08	+ 28.56	6.43	57.0	17	7	6	18	s.	J. H. Lowry.		
Summit.	Placer.	7,017	38	28.0	0.0	55	7	8	22	29	28.90	+ 20.68	4.40	283.0	17	10	1	20	sw.	Southern Pacific Co.	
Susanville.	Lassen.	4,175	22	28.2	- 2.9	55	29	—	3	18	37	11.59	+ 7.38	2.00	116.0	14	10	10	11	sw.	Jas. Branham.
Tamarack.	Alpine.	8,000	5	27.0	.....	42	27	6	47	32	39.80	.....	3.00	400.0	19	11	10	20	nw.	William Bennett.
Tehachapi.	Kern.	3,964	34	42.1	+ 3.9	60	19 ^t	30	2	—	2.32	+ 0.93	0.78	0.0	5	12	0	19	.....	Southern Pacific Co.
Tehama.	Tehama.	220	40	44.6	- 2.4	69	6	28	20	20	14.00	+ 10.42	3.00	0.0	12	16	4	11	s.	Do.	
Tejon Rancho.	Kern.	1,500	10	44.1	.....	68	10	27	2	30	1.76	.....	0.97	0.0	5	16	0	15	n.	S. Ed. Bailey.
Three Rivers.	Tulare.	870	1	48.6	.....	74	8	26	3	41	8.69	.....	1.70	0.0	14	12	7	12	sw.	E. D. Barton.
Towle.	Placer.	3,704	25	40.0	- 0.6	76	47	19	17	45	24.91	+ 15.18	2.60	73.0	16	12	1	18	s.	Southern Pacific Co.	
Tracy.	San Joaquin.	64	31	47.6	+ 0.7	61	7	28	3	41	4.71	+ 3.07	1.11	0.0	15	12	1	18	se.	Do.	
Ukiah.	Mendocino.	620	18	43.8	- 1.3	73	6	25	27	43	13.64	+ 6.12	2.80	0.0	19	15	0	16	nw.	Dr. Geo. McCowen.	
Upland.	San Bernardino.	1,750	14	52.4	+ 2.1	80	5	28	17	44	11.10	+ 7.06	4.07	0.0	8	16	5	10	w.	Chas. E. Harwood.	
Upper Lake.	Lake.	1,350	26	40.6	- 4.2	73	6	24	22	41	12.02	+ 6.16	1.75	T.	17	10	0	21	s.	G. O. Coburn.	
Vacaville.	Solano.	175	23	42.4	- 4.0	78	5	27	3	50	15.81	+ 9.94	3.22	0.0	17	9	7	15	sw.	Southern Pacific Co.	
Valley Springs.	Calaveras.	673	22	49.5	+ 3.3	62	31	33	1	—	18.52	+ 14.74	2.63	0.0	16	11	0	20	s.	Santa Fe Co.	
Visalia.	Tulare.	334	23	.....	.....	80	8	—	—	—	3.89	+ 1.95	0.98	0.0	8	11	8	12	.....	Mrs. F. S. Sandford.
Warner Springs.	San Diego.	3,165	3	49.8	.....	83	5	25	11	46	4.61	.....	1.43	0.0	8	19	5	7	sw.	Santa Fe Co.
Wasco.	Kern.	336	11	44.0	- 0.9	70	37	21	2	46	1.42	+ 0.54	0.35	0.0	9	7	11	13	.....	M. E. Lathrop.
Watsonville.	Santa Cruz.	23	15	49.8	- 2.6	78	7	27	17	49	13.37	+ 8.92	1.84	0.0	19	10	4	17	sw.	Southern Pacific Co.	
Weitchpec.	Humboldt.	1,700	1	37.6	.....	57	57	20	23	26	15.41	.....	3.07	36.0	20	12	6	13	sw.	Wm. Lumbard.
Westley.	Stanislaus.	90	22	47.3	- 1.1	66	8	27	3	50	5.70	+ 3.72	0.82	0.0	13	13	0	18	.....	Will. Harrington, jr.
Wheatland.	Yuba.	84	24	46.2	+ 1.6	72	6	30	17	41	17.36	+ 13.36	3.32	0.0	17	12	3	16	se.	M. T. Harrington, jr.	
Willows.	Glen.	136	32	46.0	+ 0.8	74	6	29	17	40	7.20	+ 3.91	1.31	T.	15	13	1	17	s.	J. P. Kelly.	
Yosemite.	Mariposa.	3,945	7	34.0	.....	62	9	13	17	44	12.19	.....	2.40	9.8	15	11	7	13	se.	Do.

^a, ^b, ^c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.^{*} Precipitation included in that of the next measurement.^{**} Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.^t Also on other dates.[†] Separate dates of falls not recorded.[§] Data are from standard instruments not supplied by the U. S. Weather Bureau.^{§§} Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.^{||} Estimated by observer.^{|||} Precipitation for the 24 hours ending on the morning when it is measured.^T Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for January, 1911. District No. 11, California.*

Stations.	River basins.	Day of month.																																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
Oregon.																																			
Klamath Agency	Klamath.																																		2,25
Klamath Falls	do.																																	2,94	
Lakeview	Pitt.																																		
Long Valley	do.																																	4,14	
Merrill	Interior drainage.																																	2,20	
Yonna	do.																																	2,51	
California.																																			
Albertine	Sacramento.																																	19,08	
Aguanga	Coast.																																	4,76	
Alameda	do.																																	12,50	
Alturas	Sacramento.																																	3,16	
Angels Camp	San Joaquin.																																	2,92	
Antioch	do.																																		
Aptos	Coast.																																	11,33	
Arrowhead Springs	do.																																	15,75	
Auburn	Sacramento.																																	20,77	
Avalon	Ocean.																																	7,31	
Azusa	Coast.																																	9,40	
Bagdad	Desert.																																	0,00	
Bakersfield	San Joaquin.																																	0,78	
Barstow	Desert.																																	0,61	
Bear River	San Joaquin.																																		
Bear Valley (1)	Sacramento.																																	58,32	
Bear Valley (2)	do.																																	10,23	
Bear Valley Dam	Coast.																																	23,69	
Belotta	San Joaquin.																																	13,91	
Ben Lomond	Coast.																																	12,38	
Berkeley	do.																																	15,99	
Biggs	Sacramento.																																	11,11	
Bishop	Owens.																																	5,02	
Bishop Creek	do.																																		
Blacksburg	Coast.																																	19,03	
Blue Canon	Sacramento.																																	3,00	
Blythe	Desert.																																		
Boulder Creek	Coast.																																	33,95	
Bowman's Dam	Sacramento.																																		
Branscomb	Coast.																																	49,74	
Brush Creek	Sacramento.																																	6,02	
Burney	do.																																	20,30	
Butte Valley	do.																																	90,21	
Calexico	Desert.																																	0,47	
Caliente	San Joaquin.																																	0,47	
Calistoga	Coast.																																	17,67	
Campbell	do.																																	12,61	
Camp	do.																																	1,10	
Campptonville (near).	Sacramento.																																	46,88	
Cedarville	Mountain Lakes.																																	3,67	
Chester	Sacramento.																																		
Chico	do.																																	11,39	
Chico (near).	do.																																		
China Flat	Coast.																																		
Chino	do.																																		
Cisco	Sacramento.																																		
Claremont	Coast.																																		
Cloverdale	do.																																		
Colfax	Sacramento.																																	29,38	
Colgate	do.																																		
Colusa	do.																																		
Corning	do.																																	7,26	
Cuyamaca	Coast.																																		
Daunt	San Joaquin.																																		
Davisville	Sacramento.																																		
Deer Creek	Coast.																																		
Del Monte	do.																																		
Delta	Sacramento.																																		
Denair	San Joaquin.																																		
Descanso	Coast.																																		
Dinuba	San Joaquin.																																		
Dobbins	Sacramento.																																		
Downieville	do.																																		
Dudley	San Joaquin.																																		
Dunnigan	Sacramento.																																		
Dunsmuir	do.																																		
Durham	Coast.		</td																																

TABLE 2.—*Daily precipitation for January, 1911. District No. 11—Continued.*

TABLE 2.—*Daily precipitation for January, 1911. District No. 11—Continued.*

TABLE 2.—*Daily precipitation for January, 1911. District No. 11—Continued.*

MONTHLY WEATHER REVIEW.

JANUARY, 1911

TABLE 3.—Maximum and minimum temperatures for January, 1911. District No. 11, California.

Date.	Lakeview, Oreg.		California.																								
			Alturas.		Barstow.		Branscomb.		Brawley.		Colusa.		Eureka.		Fresno.		Independ- ence.		Los Angeles.		Mount Tamalpais.		Nevada City.		Porter- ville.		Red Bluff.
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	
1			37	25	61	22	62	27	64	28	50	38	54	27	52	28	64	45	48	37	55	20	58	31	57	35	
2			43	19	60	23	64	28	52	36	59	30	57	28	60	45	52	42	62	22	58	30	60	40	40		
3			49	16	60	19	68	29	59	27	51	38	60	34	52	23	69	43	54	41	62	25	62	29	60	34	
4			54	19	65	20	70	34	70	28	52	37	65	33	61	33	80	49	61	52	71	29	66	29	73	44	
5			52	18	70	18	72	36	74	30	52	36	62	36	66	30	82	59	62	54	74	28	67	34	70	38	
6			52	15	70	28	74	40	76	34	53	40	65	34	62	34	81	55	64	53	75	27	72	33	72	54	
7			54	20	71	29	70	38	72	33	50	44	71	37	59	27	75	49	66	51	70	29	75	34	63	43	
8			53	20	72	28	65	33	71	29	51	42	72	42	56	26	71	51	51	39	64	29	76	35	59	36	
9			44	27	68	28	56	39	66	36	52	39	60	45	56	34	58	52	45	35	45	35	67	39	52	40	
10			33	15	60	39	33	29	—	—	46	36	56	39	54	32	58	48	40	32	41	30	55	42	47	34	
11			32	22	62	32	40	30	63	41	45	37	54	39	52	24	57	43	44	39	35	30	62	35	50	39	
12			29	16	64	28	37	30	65	34	42	35	59	47	54	32	61	42	40	37	41	31	68	45	39	34	
13			30	— 2	62	25	38	32	65	34	47	34	61	49	54	38	61	44	46	33	41	29	69	46	41	30	
14			36	23	53	34	37	33	55	41	47	39	64	45	49	31	56	46	43	36	41	30	69	43	40	36	
15			35	14	59	34	47	32	62	49	51	43	58	41	54	36	56	48	42	35	48	30	57	49	49	37	
16			30	— 14	69	34	47	34	67	40	56	46	59	35	51	28	61	43	47	37	53	23	68	36	52	35	
17			40	— 15	65	31	48	37	70	43	56	50	59	32	50	20	66	44	49	38	55	22	62	34	49	37	
18			41	25	72	30	45	42	72	36	57	51	59	37	52	22	67	46	43	41	52	25	62	34	51	42	
19			41	22	80	31	48	43	75	36	54	46	65	36	55	22	69	48	48	41	48	33	69	32	49	47	
20			36	16	79	30	49	37	74	35	48	40	52	47	60	33	63	45	49	38	45	39	63	40	51	41	
21			20	— 14	69	35	52	24	69	42	46	33	50	42	56	34	59	51	43	34	55	29	65	47	52	40	
22			11	— 20	67	32	50	23	70	41	51	31	58	43	52	26	68	50	44	37	62	22	57	51	53	32	
23			31	— 21	70	43	48	25	73	42	48	34	56	45	49	28	69	53	43	38	49	28	58	42	41	31	
24			43	27	61	44	46	35	74	50	49	43	55	50	54	40	59	53	47	35	46	36	57	51	44	38	
25			38	17	69	47	49	34	72	46	48	37	56	44	60	35	59	50	42	36	42	34	66	51	51	37	
Mns			39.3	14.1	66.2	23.0	48.5	33.9	68.8b	39.6b	—	50.4	40.2	59.6	41.4	54.1	30.6	64.9	48.9	48.4	39.5	51.7	30.0	64.3	41.1	52.5	39.4

Date.	Redlands.		Sacramento.		San Diego.		San Fran- cisco.		San Jose.		San Luis Obispo.		Santa Barbara.		Santa Rosa.		Sisson.		Stockton.		Summit.		Susanville.		Yosemite.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	64	29	54	34	60	41	59	44	52	29	58	46	69	39	62	32	41	20	52	33	32	14	39	18	48	13
2	64	33	61	38	69	43	62	47	63	30	63	46	68	40	67	29	41	18	48	31	39	15	44	17	47	13
3	65	33	56	35	61	41	58	44	62	31	65	38	68	40	61	27	49	26	50	32	44	24	38	17	54	17
4	73	38	60	34	72	47	65	44	68	34	75	48	75	39	65	29	50	26	53	31	44	22	49	16	53	18
5	81	39	62	35	75	52	64	47	71	31	77	52	82	43	66	26	51	28	52	30	43	28	44	20	53	18
6	75	39	71	37	74	54	72	51	74	33	76	50	77	48	80	30	53	31	56	32	45	24	43	19	59	18
7	74	38	62	41	74	50	68	48	72	36	78	44	79	46	70	32	52	30	53	38	55	31	46	22	54	19
8	72	37	61	38	69	49	58	45	70	34	68	37	68	40	62	28	49	28	55	36	44	30	48	26	54	18
9	55	47	54	42	61	53	56	47	55	41	55	46	57	42	54	44	43	22	52	39	32	27	40	22	62	18
10	53	49	49	35	58	49	51	44	51	36	53	37	59	50	51	30	36	27	50	38	27	15	36	18	44	22
11	54	33	47	41	57	44	52	45	55	42	52	33	58	38	54	42	32	30	54	40	25	18	36	24	34	24
12	59	30	51	44	58	41	55	46	60	48	52	47	55	52	51	42	36	18	58	44	29	18	31	26	34	29
13	61	30	47	39	58	44	55	44	55	45	56	49	57	50	49	39	32	11	56	47	32	23	31	24	35	29
14	55	37	53	37	58	47	51	45	53	43	54	48	55	52	51	41	37	19	52	42	33	27	32	22	38	29
15	53	47	51	41	59	53	52	44	58	39	57	39	58	52	54	37	32	25	50	34	31	26	39	20	40	29
16	59	41	53	36	58	48	55	44	61	36	61	37	59	36	56	34	35	31	52	34	37	17	24	10	46	15
17	65	34	54	37	61	44	55	43	59	35	63	42	55	37	58	34	30	59	33	30	23	10	24	9	43	13
18	70	36	50	40	62	46	53	45	58	37	62	36	65	41	55	42	36	28	58	34	34	18	20	— 3	46	16
19	73	37																								